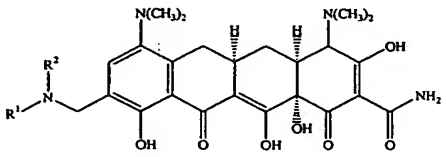
CLAIMS

1. A tetracycline compound of the formula (I):



(I)

wherein

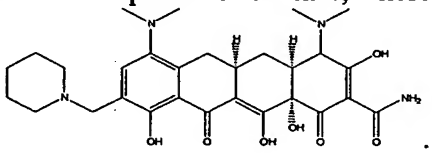
R^1 and R^2 are linked to form a ring, or pharmaceutically acceptable salts, prodrugs and esters thereof.

2. The tetracycline compound of claim 1, wherein R^1 and R^2 are linked to form a five membered ring.

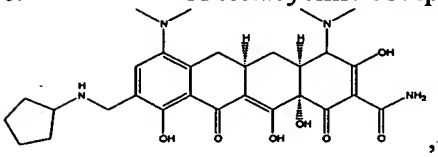
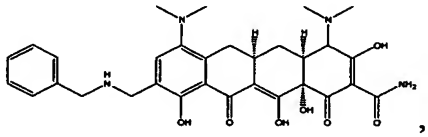
3. The tetracycline compound of claim 1, wherein R^1 and R^2 are linked to form a six membered ring.

4. The tetracycline compound of claim 3, wherein R^1 and R^2 are linked to form a piperdine ring, morpholine ring, pyridine ring, or a pyrazinyl ring.

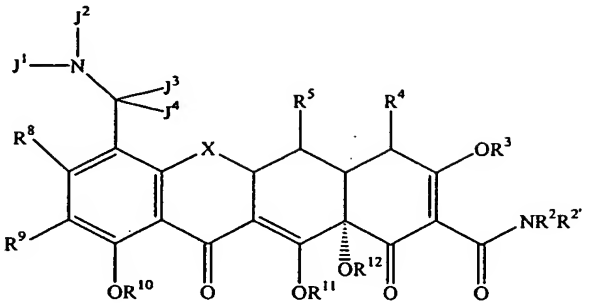
5. The tetracycline compound of claim 4, wherein said compound is:



6. A tetracycline compound of the formula:


, 
, or pharmaceutically accepable salts, esters or prodrugs thereof.

7. A tetracycline compound of the formula (II):



(II)

wherein:

J^1 and J^2 are each independently hydrogen, aryl, sulfonyl, acyl, or linked to form a ring, provided that at least one of J^1 or J^2 is not hydrogen;

J^3 and J^4 are each alkyl, halogen, or hydrogen;

X is $CHC(R^{13}Y'Y)$, $CR^{6'}R^6$, $C{=}CR^{6'}R^6$, S, NR^6, or O;

R^2, $R^{2'}$, $R^{4'}$, and $R^{4''}$ are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^4 is $NR^{4'}R^{4''}$, alkyl, alkenyl, alkynyl, aryl, hydroxyl, halogen, or hydrogen;

$R^{2'}$, R^3, R^{10}, R^{11} and R^{12} are each hydrogen or a pro-drug moiety;

R^5 is hydroxyl, hydrogen, thiol, alkanoyl, aroyl, alkaroyl, aryl, heteroaromatic, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, alkyl carbonyloxy, or aryl carbonyloxy;

R^6 and $R^{6'}$ are each independently hydrogen, methylene, absent, hydroxyl, halogen, thiol, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

R^9 is hydrogen, nitro, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, arylalkyl, amino, arylalkenyl, arylalkynyl, thionitroso, or $-(CH_2)_{0\text{-}3}NR^{9c}C(=Z')ZR^{9a}$;

Z is $CR^{9d}R^{9e}$, S, NR^{9b} or O;

Z' is O, S, or NR^{9f};

R^{9a}, R^{9b}, R^{9c}, R^{9d}, and R^{9e} are each independently hydrogen, acyl, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^8 is hydrogen, hydroxyl, halogen, thiol, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

R^{13} is hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl; and

Y' and Y are each independently hydrogen, halogen, hydroxyl, cyano, sulfhydryl, amino, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl,

alkylsulfonyl, alkylamino, or an arylalkyl, and pharmaceutically acceptable salts, esters, and prodrugs thereof.

8. The tetracycline compound of claim 7, wherein R^4 is $NR^{4'}R^{4''}$, X is $CR^6R^{6'}$; R^2, $R^{2'}$, R^6, $R^{6'}$, R^8, R^9, R^{10}, R^{11}, and R^{12} are each hydrogen; $R^{4'}$ and $R^{4''}$ are lower alkyl; and R^5 is hydroxy or hydrogen.

9. The tetracycline compound of claim 8, wherein $R^{4'}$ and $R^{4''}$ are each methyl and R^5 is hydrogen.

10. The tetracycline compound of claim 7, wherein J^3 and J^4 are hydrogen.

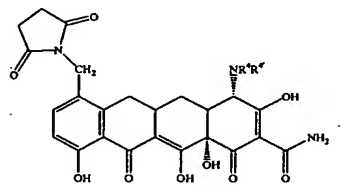
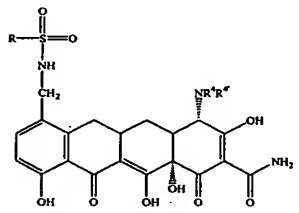
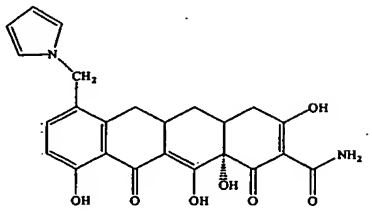
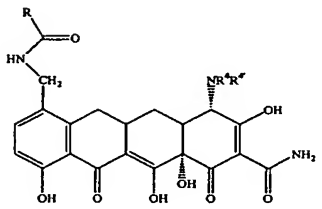
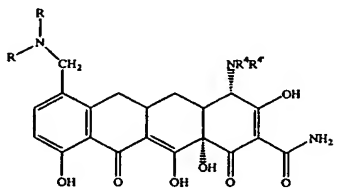
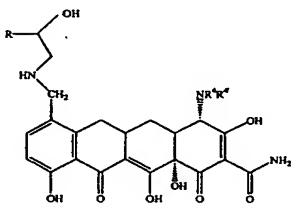
11. The tetracycline compound of claim 7, wherein J^1 is substituted or unsubstituted alkyl.

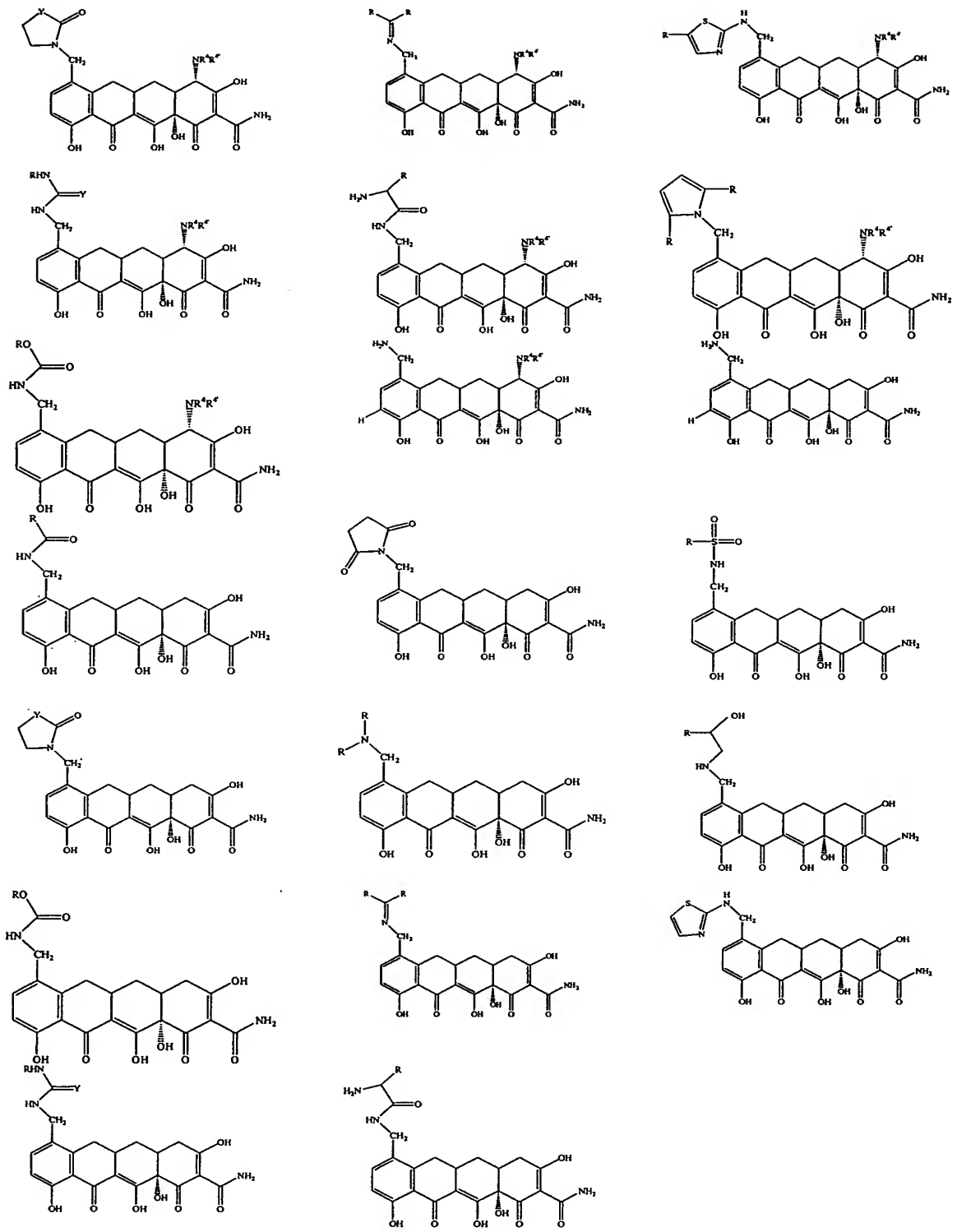
12. The tetracycline compound of claim 7, wherein J^1 is sulfonyl.

13. The tetracycline compound of claim 7, wherein J^1 and J^2 are linked to form a ring.

14. The tetracycline compound of claim 7, wherein J^1 is heteroaryl.

15. A tetracycline compound, wherein said compound is selected from the group consisting of:



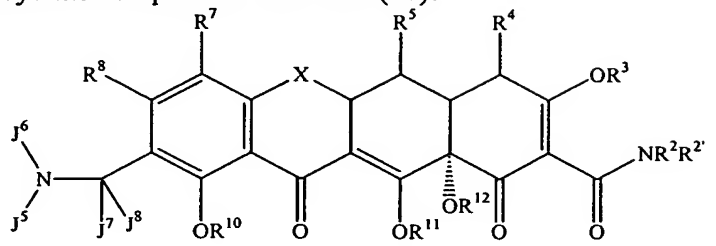
wherein

R is substituted or unsubstituted alkyl, alkenyl, alkynyl, halogen, alkoxy; and

Y is N, O, or S, or pharmaceutically acceptable salts, esters, or prodrugs

thereof.

16. A tetracycline compound of formula (III):



(III)

wherein:

J^5 and J^6 are each independently hydrogen, alkyl, alkenyl, alkynyl, aryl, sulfonyl, acyl, alkoxycarbonyl, alkaminocarbonyl, alkaminothiocarbonyl, substituted thiocarbonyl, substituted carbonyl, alkoxythiocarbonyl, or linked to form a ring;

J^7 and J^8 are each alkyl, halogen, or hydrogen;

X is $CHC(R^{13}Y'Y)$, $CR^{6'}R^6$, $C{=}CR^{6'}R^6$, S, NR^6, or O;

R^2, $R^{2'}$, $R^{4'}$, and $R^{4''}$ are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^4 is $NR^{4'}R^{4''}$, alkyl, alkenyl, alkynyl, aryl, hydroxyl, halogen, or hydrogen;

$R^{2'}$, R^3, R^{10}, R^{11} and R^{12} are each hydrogen or a pro-drug moiety;

R^5 is hydroxyl, hydrogen, thiol, alkanoyl, aroyl, alkaroyl, aryl, heteroaromatic, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, alkyl carbonyloxy, or aryl carbonyloxy;

R^6 and $R^{6'}$ are each independently hydrogen, methylene, absent, hydroxyl, halogen, thiol, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

R^7 is hydrogen;

R^8 is hydrogen, hydroxyl, halogen, thiol, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

R^{13} is hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl; and

Y' and Y are each independently hydrogen, halogen, hydroxyl, cyano, sulfhydryl, amino, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl, and pharmaceutically acceptable salts thereof.

17. The tetracycline compound of claim 16, wherein R^4 is $NR^{4'}R^{4''}$, X is $CR^6R^{6'}$; R^2, $R^{2'}$, R^6, $R^{6'}$, R^8, R^{10}, R^{11}, and R^{12} are each hydrogen; $R^{4'}$ and $R^{4''}$ are lower alkyl; and R^5 is hydroxy or hydrogen.

18. The tetracycline compound of claim 17, wherein $R^{4'}$ and $R^{4''}$ are each methyl and R^5 is hydrogen.

19. The tetracycline compound of claim 16, wherein J^7 and J^8 are hydrogen.

20. The tetracycline compound of claim 16, wherein J^5 is substituted or unsubstituted alkyl.

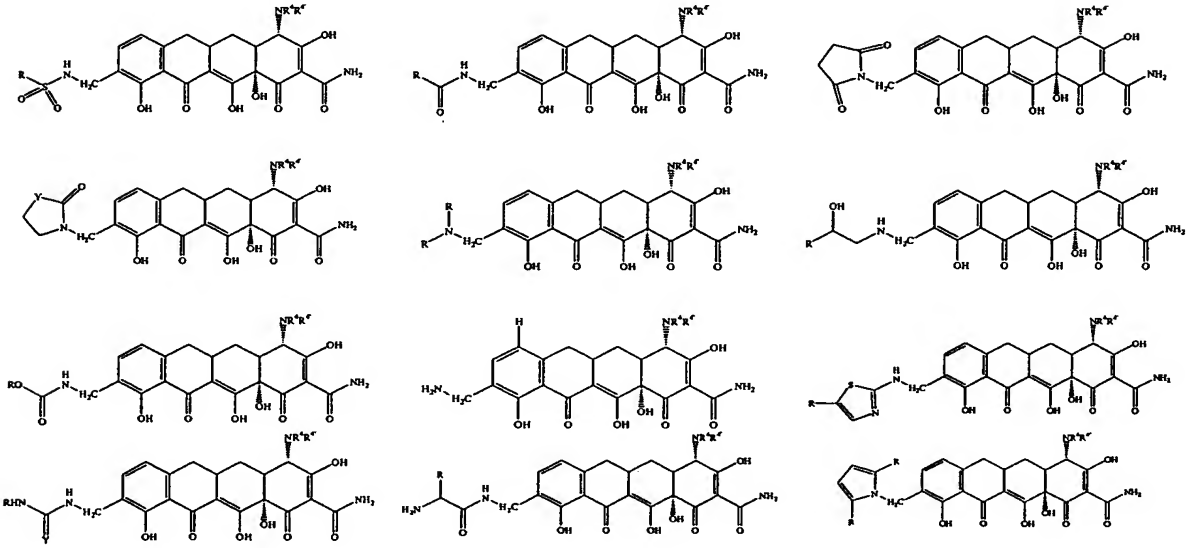
21. The tetracycline compound of claim 16, wherein J^5 is sulfonyl.

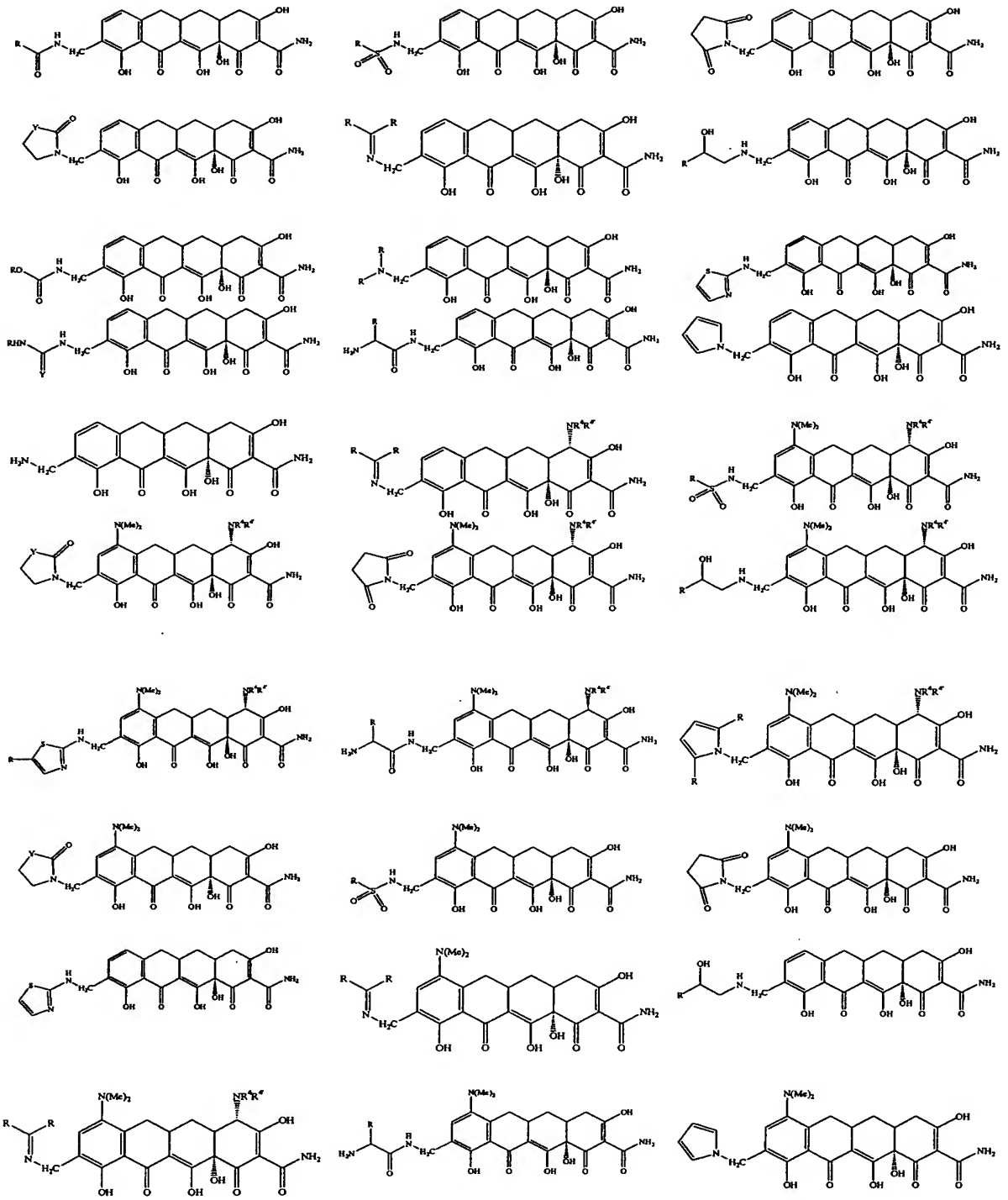
22. The tetracycline compound of claim 16, wherein J^5 and J^6 are linked to form a ring.

23. The tetracycline compound of claim 16, wherein J^5 is heteroaryl.

24. The tetracycline compound of claim 16, wherein J^5 is substituted carbonyl.

25. The tetracycline compound of claim 16, wherein said compound is selected from the group consisting of:





wherein

R is substituted or unsubstituted alkyl, alkenyl, alkynyl, halogen, alkoxy; and

Y is N, O, or S, or pharmaceutically acceptable salts or prodrugs thereof.

26. A tetracycline compound of Table 1, or a pharmaceutically acceptable salt thereof.

27. A pharmaceutical composition comprising an effective amount of a tetracycline compound of any one of claims 1, 15, 16, 25 or 26, and a pharmaceutically acceptable carrier.

28. The pharmaceutical composition of claim 27, wherein said effective amount is effective to treat a tetracycline responsive state.

29. A method for treating a tetracycline responsive state in a subject, comprising administering to said subject a tetracycline compound of any one of claims 1, 15, 16, 25 or 26, such that said subject is treated.

30. The method of claim 29, wherein said tetracycline responsive state is an inflammatory process associated state.

31. The method of claim 29, wherein said tetracycline responsive state is cancer, a lung injury, an eye disorder, neurological disorder or stroke.

32. The method of claim 29, wherein said tetracycline responsive state is a bacterial infection.

33. The method of claim 32, wherein said bacterial infection is associated with *E. coli.*

34. The method of claim 32, wherein said bacterial infection is associated with *S. aureus.*

35. The method of claim 32, wherein said bacterial infection is associated with *E. faecalis.*

36. The method of claim 32, wherein said bacterial infection is resistant to other tetracycline antibiotics.

37. The method of claim 32, wherein said bacterial infection is associated with gram positive bacteria.

38. The method of claim 32, wherein said bacterial infection is associated with gram negative bacteria.

39. The method of claim 29, wherein said tetracycline responsive state is a viral or fungal infection.

40. The method of claim 29, wherein said tetracycline compound is administered with a pharmaceutically acceptable carrier.

41. The method of claim 29, wherein said subject is a human.